

# INCIDENT ACTION PLAN

Be brief and concise with your entries

<b>Location</b> Bayou Corne Sink Hole	<b>Control Level</b> Company Supervisory	<b>Operational Period</b> From 1/2/13      To /3/13
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<p><b>1.0 SITUATION</b> Disease, community, environment</p> <p>PROMPTS: Weather, disease trends, Resources, Hazards &amp; safety</p> <p>REFERENCE: Maps, weather reports, Sitreps, appreciation, warnings, alerts</p>	<p><b>CURRENT</b> Cloudy</p>
	<p><b>PREDICT</b> Rain</p>
<p><b>2.0 OBJECTIVES (or MISSION)</b></p> <p>PROMPTS: Time &amp; space</p> <p>REFERENCE: Appreciation – control options, courses open to disease</p>	<p><b>CURRENT</b></p> <p><b>Objective 1 - Gas Monitoring:</b></p> <p>3 Gas Monitors have been set up in the field and are obtaining data on a continuous basis.</p> <p>The monitors are running on batteries which must be changed out every morning. Three monitors are located in the swamp and are required to be reached via airboats launched from TBC facilities.</p> <p>The continuous monitoring data is collected at an office trailer located at Texas Brine Grand Bayou Facility. Monitoring the information on a 24 hours basis. Monitoring is being recorded for LEL, VOC, H2S and O2.</p> <p><b>Respec Mining &amp; Energy: See Attached</b> In-place inclinometers and tilt meter monitoring system, weekly report</p> <p><b>Objective 2- Elevation survey taking place once a week.</b></p> <p><b>Objective 3- Sink hole observation. No slough in / No bubbling</b></p> <p>Phase 2 of the remediation plan continues. We are using one vacuum truck, and two mop skimmers to remove hydrocarbons. See Attached Plan.</p>
	<p>ALTERNATE</p>

<p><b>3.0 EXECUTION</b>    add safety information as appropriate</p>
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<p><b>GENERAL OUTLINE</b></p> <p>PROMPTS:</p>	<p><b>Safety Information: See Attached Safe Work Rules</b> <b>Reference IAP dated 8/9/12</b></p>
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<p>Strategies &amp; tactics (current/proposed/alternate)</p> <p>REFERENCE: Appreciation, Control Options</p>	<p><b>Additional to our Safe Work Rules for this project we are adding the awareness of insects, reptiles and animals.</b></p> <p><b>Inspect location for flammability</b></p> <p><b>Daily Safety Meetings</b></p> <p><b>PPE Required on site: Respirator w/ VOC Cartridge, Gloves for sampling, eye protection, life preservers, hearing protection.</b></p>
<p><b>GROUPINGS</b></p>	<p><b>NA</b></p>
<p><b>TASKS</b> Including PR &amp; Media</p>	<p><b>Same as above</b></p>
<p><b>COORDINATING INSTRUCTIONS</b></p> <p>PROMPTS: Timings, routes, assembly areas, staging areas</p>	<p><b>Texas Brine Grand Bayou Facility will be used as staging area.</b></p>
<p><b>4.0 ADMINISTRATION</b> (Logistics support)</p> <p>PROMPTS: Unit names, locations, contact names, phone no's, timings, duties/tasks, routes, suppliers, quantities, status (required, organised, stand by, enroute)</p>	
<p><b>SUPPLY</b> WHO, WHAT, WHERE, WHEN of resources not readily available</p>	<p><b>NA</b></p>
<p><b>GROUND SUPPORT</b> Transport of personnel, traffic mgt, refuelling, mechanical repair/maintenance</p>	<p><b>NA</b></p>
<p><b>COMMUNICATIONS</b> Installation, maintenance, technical advice</p>	<p><b>Cell Phone &amp; Landline Communications:</b></p> <p><b>Kenneth Blanchard – Area Manager – 985- [REDACTED] (985- [REDACTED])</b>  <b>kblanchard@texasbrine.com</b></p> <p><b>Scott Borne – Facility Manager – 985- [REDACTED] (985- [REDACTED])</b>  <b>sborne@texasbrine.com</b></p> <p><b>Joel Miller, PE – Consultant – 337- [REDACTED] (337- [REDACTED])</b> joel.miller@cox-internet.com</p> <p><b>Bruce Martin – Operations/PR – 713- [REDACTED] (281- [REDACTED])</b></p>



<p><b>COORDINATION &amp; LIAISON</b></p> <p>Local knowledge, police, agency reps, emergency mgt reps</p>	<p><b>NA</b></p>
<p><b>COMMUNICATIONS</b></p> <p>PROMPTS Communications structure, operational comms plan, information mgt</p>	<p><b>Plant Management – Contractor Communication via Cell Phone</b></p>

<p style="text-align: center;"><b>EXTRAS</b></p>	
<p><b>Attachments</b></p> <p>PROMPTS: maps, weather, organisational charts, resources, comms diagram</p>	<p><b>Current Weather Safe Work Rules</b></p>
<p><b>Plan developers</b></p> <p>PROMPTS PO, Logs Mgr, Controller</p>	<p><b>NA</b></p>
<p><b>Approval</b></p> <p>Controller, Ops Director</p>	<p><b>TBC Company Rep:</b> <i>Scott Borne</i></p> <p><b>FOSC:</b></p> <p><b>SOSC:</b></p> <p><b>POSC:</b></p>

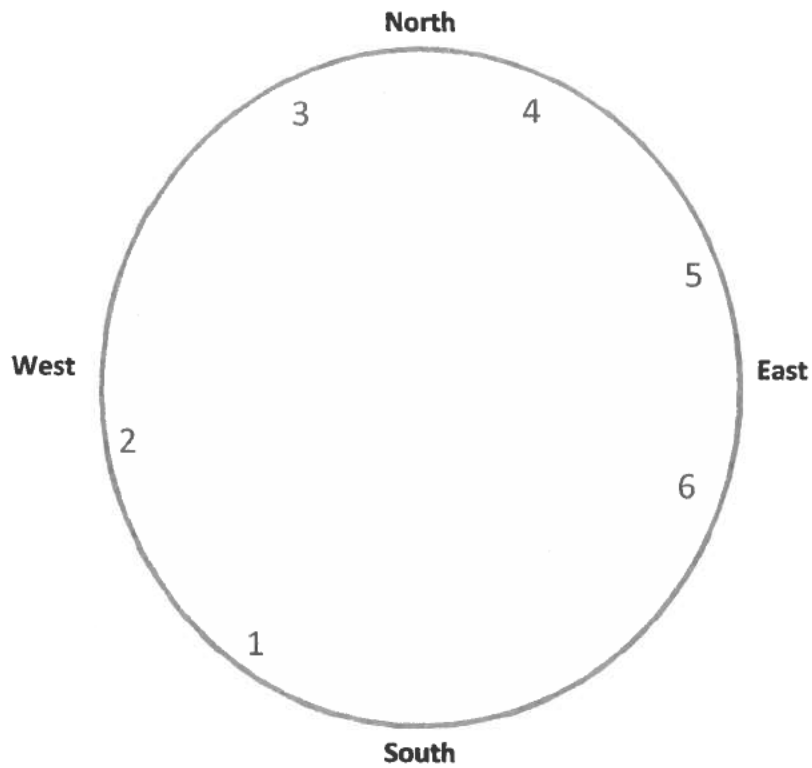
# Bayou Corne Sinkhole

Revised: 11/7/12

Date and Time:

1/1/13

	Time	Time	Time	Time
	9:00pm			
Tree 1	X			
Tree 2	X			
Tree 3	X			
Tree 4	X			
Tree 5	✓			
Tree 6	✓			



*Ashia Bourgeois*

TBC Oxy Grand Bayou Sinkhole Management Plan

Phase Two- Crude Oil/Vegetation/Debris Removal

10-12-2012

(THIS PLAN CAN BE ADJUSTED BY TBC FOR WEATHER RELATED ISSUES, OR SITE CONDITIONS)

This plan is being followed as an approach to sinkhole management. The primary focus for this plan is to:

1. Recover liquid hydrocarbons that are found on the surface of the sinkhole. By removing the free phase Hydrocarbons that are found on the surface of the sinkhole, off-site migration of these Hydrocarbons will be greatly reduced. Thus, limiting the impacts of the Hydrocarbons to the sinkhole surface and the immediate area. Additionally, the removal of the free phase Hydrocarbons will greatly reduce the "smell" associated with the sinkhole.
2. To further understand the dynamics of the sinkhole, through profiling and visual observation of the surface of the sinkhole.

Phase One focused on the removal of floating vegetation and debris within the sinkhole. To date, the vast majority of floating vegetation and debris has been cleaned and cleared off of the surface of the sinkhole area. On October 8, 2012, we began to bring on site equipment and staffing to move into Phase Two of the Sinkhole Management, Crude Oil Removal.

Crude Oil removal will take place on near the mat road that was constructed on September 24, 2012. Texas Brine began reconstruction of the mat road at well pad #3, going toward the sinkhole. This road has been constructed of river sand, filter fabric and wooden mats. The mat road has been constructed in the previous footprint, to the outside and on the eastern side of the sinkhole.

As discussed in the Phase One Plan for Sinkhole Management, the mat road will play a vital part in our recovery of oiled vegetation and crude oil removal. Texas Brine plans to collect crude oil via physical means with skimmers, and vacuums. We will also use Air Boats to sweep the surface of the sinkhole. Texas Brine has fabricated an oil collection box that will be placed at the end of the mat road, in the water, that will assist in the collection of crude oil.

Product that is recovered will be placed into a frac tank and stored for disposal. These Frac tanks are stored near the sinkhole in an orderly fashion. The vacuum trucks that are used are inspected for leaks and drips prior to leaving the facility for disposal. Occasionally, the Long-reach boom and operator may have to go back out on the mat road to sweep in additional debris that has been swept in by the air boats. The additional debris will be handled as discussed in Phase One. As a safety precaution, the truck driver will be instructed to remain in his vehicle with on ready should any movement be observed on the sinkhole. The truck driver will remain at/in his vehicle during the loading process. A spotter will be placed in a stationary location on Well Pad # 3 to watch for any movement of trees or debris in the sinkhole. Additionally, there will be supervision of the project entire project by TBC Employees.

Texas Brine is following the advice offered by LA DNR and pursuing the use of Oil Gator, as an in-situ remediation of crude oil in hard to reach places or in marginal places where oil may have escaped the containment boom. Texas Brine will not proceed with the use of this material or other materials until approval has been issued by the lead agency on this incident. The use of any such absorbent material will be used to augment the traditional physical oil removal procedures.

If any personnel or contractors are allowed onto the sinkhole, then air monitoring devices will be used to monitor the levels of VOC's on the site.

The safe execution of this activity is the goal of TBC. This is why every person entering the property, must wear proper PPE (Hard Hat, Long Pants, Steel Toed Boots, and Safety Glasses).

## Site Specific Safety Plan for Remediation of the Bayou Corne Sink Hole

The following plan is a site specific plan for the remediation of the Bayou Corne sink hole which will be achieved in two Phases. Phase one will include the construction of an access road to the sink hole which will allow the use of a long reach excavator. The excavator will be used to remove vegetation near the access road and place into roll off boxes. Phase two will consist of placing one or more airboats with attached rakes that will be used to push vegetation towards the access road where it will be removed and placed in roll off boxes. By removing the vegetation this allow us the use of skimmers and absorbent booms to aid in hydrocarbon removal.

### Site Setting

The Texas Brine facility is located at 1301 Hwy 70, Belle Rose, LA 70341. The facility is located South of 70. The site is located on raised pads and roads but the property is otherwise swamp. A site map is attached. The nearest hospital Our Lady of the Lake is located in Napoleonville, LA. which is a 15 minute trip.

### Site Specific Hazards

The site is located in a swamp setting and potential dangers may be present. Personnel should be aware of

Alligators

Wasps

Snakes

Spiders

### Emergency Contact

911 will used in any emergency.

Cell phones on site

### Site Safety

#### Safety Meeting

Held at the beginning of each shift.

#### PPE Requirements

Hard hat

Safety Glasses

Steel toe boots

#### Air Monitoring

A system of air monitoring devices have been placed across the property surrounding the sink hole. One air monitoring device is located next to the access road.

Airboats will have hand held monitors on there person at all times when on the sink hole

#### Spotters and Warnings

A person or persons armed with an air horn will be placed on site looking for safety issues such as

Leaning trees

Falling trees

Ground Movement

Driver of the truck attached to the roll off box will remain in the truck at all times and will be ready to vacate the access road on signal.

#### Heavy Equipment

Long reach excavator

#### Environmental

Vegetation will be placed in lined roll off boxes and disposed of.

Airboats will remain inside the containment boom once entered

Decon of airboats will take place on location pad next to access road.



December 30, 2012

Mr. Bruce Martin  
Vice President of Operations  
Texas Brine Company, LLC  
4800 San Felipe  
Houston, TX 77056

Dear Mr. Martin:

**RE: In-Place Inclinometer, Tiltmeter, and Water-Level Monitoring System, Napoleonville Dome Weekly Report: December 22 Through December 28, 2012**

RESPEC is pleased to submit this weekly report on the in-place inclinometer (IPI), tiltmeter, and water-level monitoring system installed around the sinkhole located near the western flank of the Napoleonville Dome, Assumption Parish, Louisiana. Water level data in this report and the attached Excel file are submitted in response to Directive #5 contained in the October 11, 2012 Third Amendment to Declaration of Emergency and Directive from the Department of Natural Resources Office of Conservation.

Monitoring locations are shown in Figure 1. Graphs illustrating the tilt data, as recorded by each instrument, are provided in Figures 2-4. The IPI data for the X-directions and Y-directions are plotted separately in Figures 2 and 3, respectively. The tiltmeter data for both the X- and Y-directions are plotted in Figure 4. A condition reflecting no changes in ground movement plots as a horizontal line on these graphs. Note that the instruments installed are very sensitive; they can measure ground tilt to less than 1/100 of a degree. Alarm levels are set at  $\pm 1.0$  degree for all inclinometers and  $\pm 0.5$  degree for all tiltmeters. Water levels measured at IPI-2 and southwest of Pad 3 are shown in Figure 5; an Excel file with this data is attached.

An event occurred between 2:00 and 2:15 am on Dec 26<sup>th</sup>. IPI-2 tilted 0.02 degrees to the northwest and IPI-4 tilted 0.05 degrees to the northeast (toward the sinkhole). The white arrows in Figure 6 show the direction of tilt. Water levels concurrently dropped 0.03 inches. Evidence of movement was not recorded on other IPIs or tiltmeters at the time.

Sincerely,



Eric L. Krantz, P.E.  
Engineer

ELK:elk

cc: Mr. Mark Cartwright, Texas Brine Company, LLC  
Mr. Scott Borne, Texas Brine Company, LLC

RSI-xxxx-xx-xxx



Sinkhole survey data provided by Joel Miller & Associates. Survey date 10/30/12.

Figure 1. Monitoring Locations.

RSI-xxxx-xx-xxx

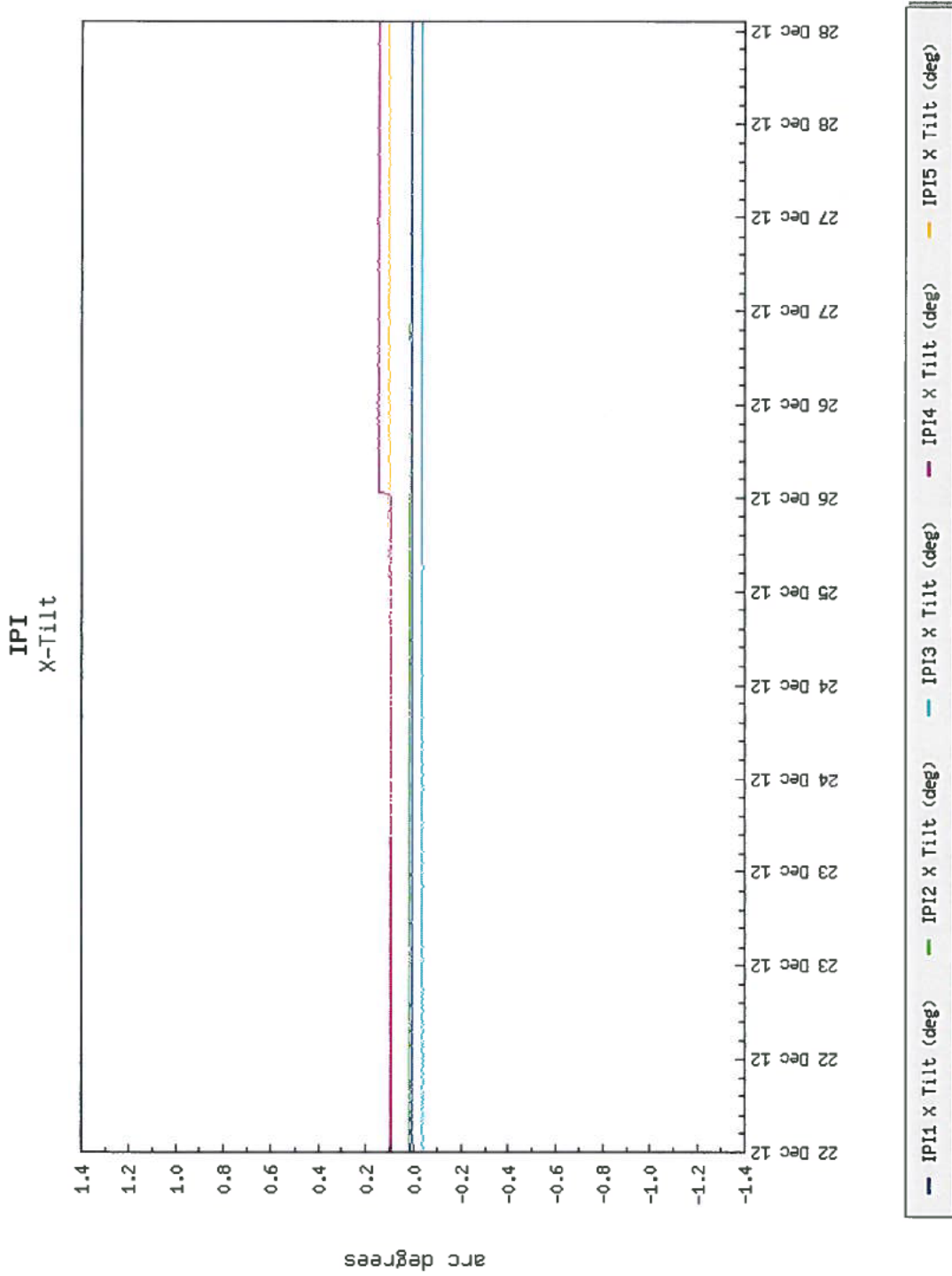


Figure 2. Inclinometer X-Direction Temporal Trends.

RSI-xxxx-xx-xxx

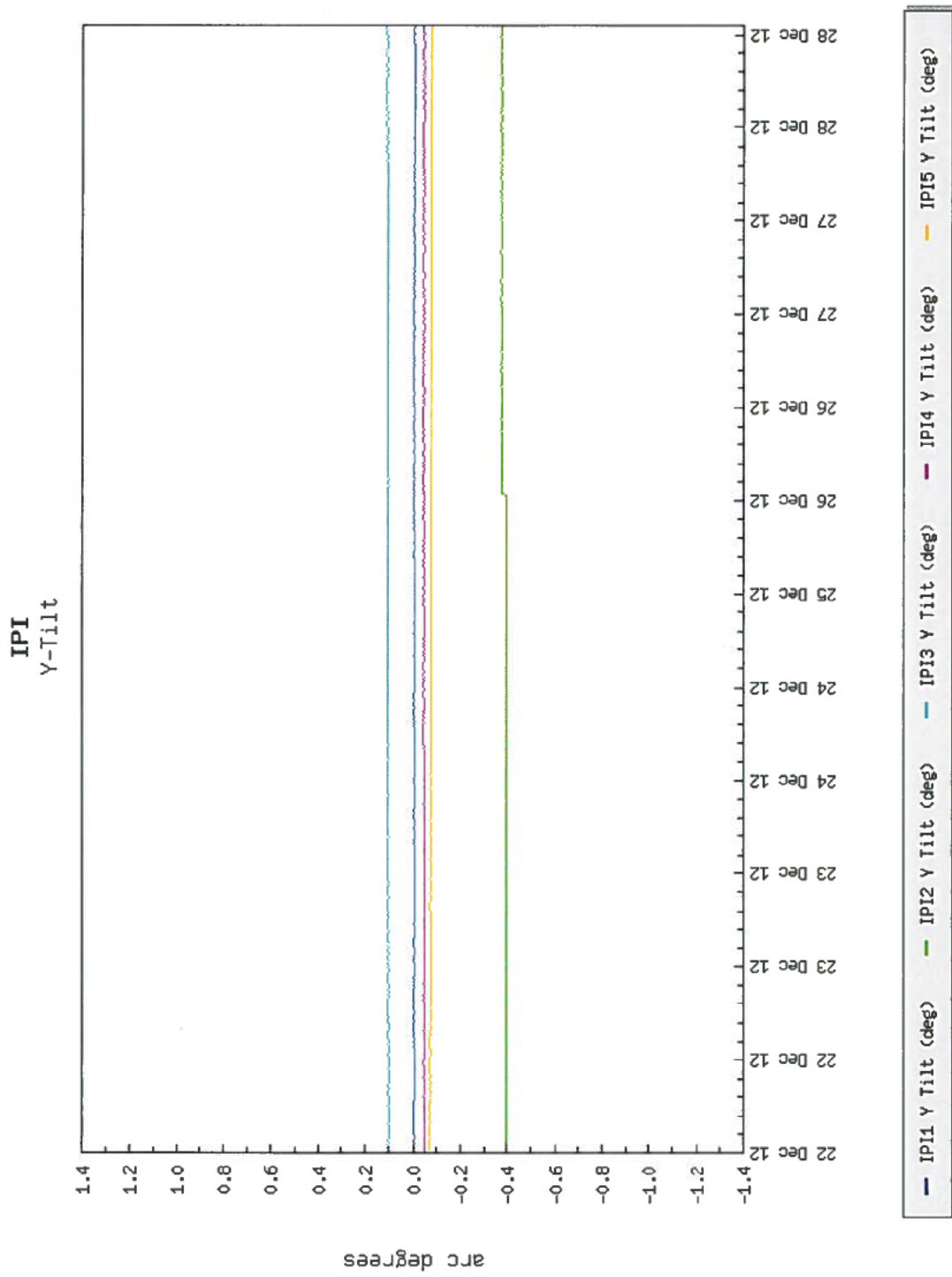


Figure 3. Inclinometer Y-Direction Temporal Trends.



RSI-xxxx-xx-xxx

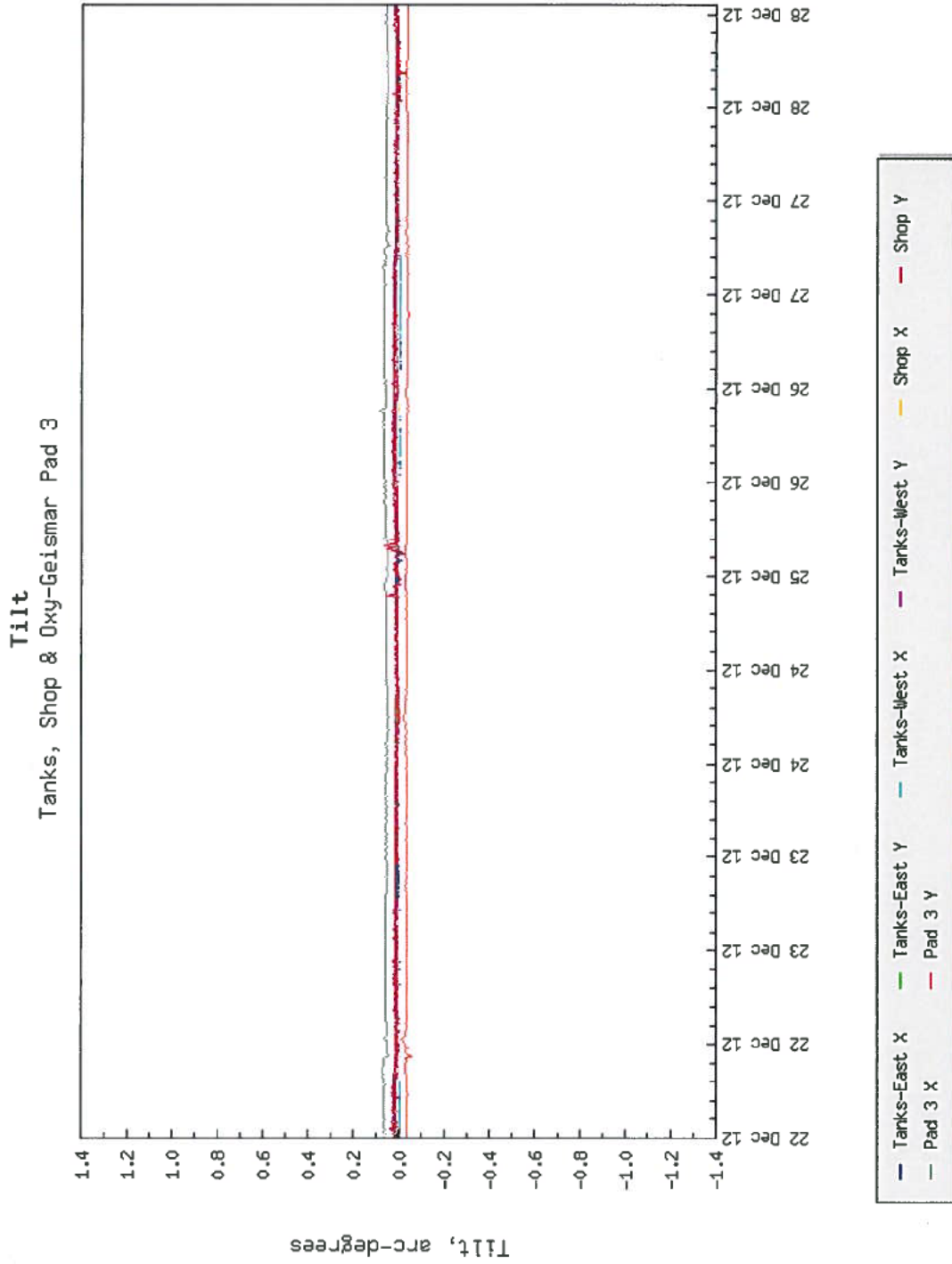


Figure 4. Tiltmeter Temporal Trends.

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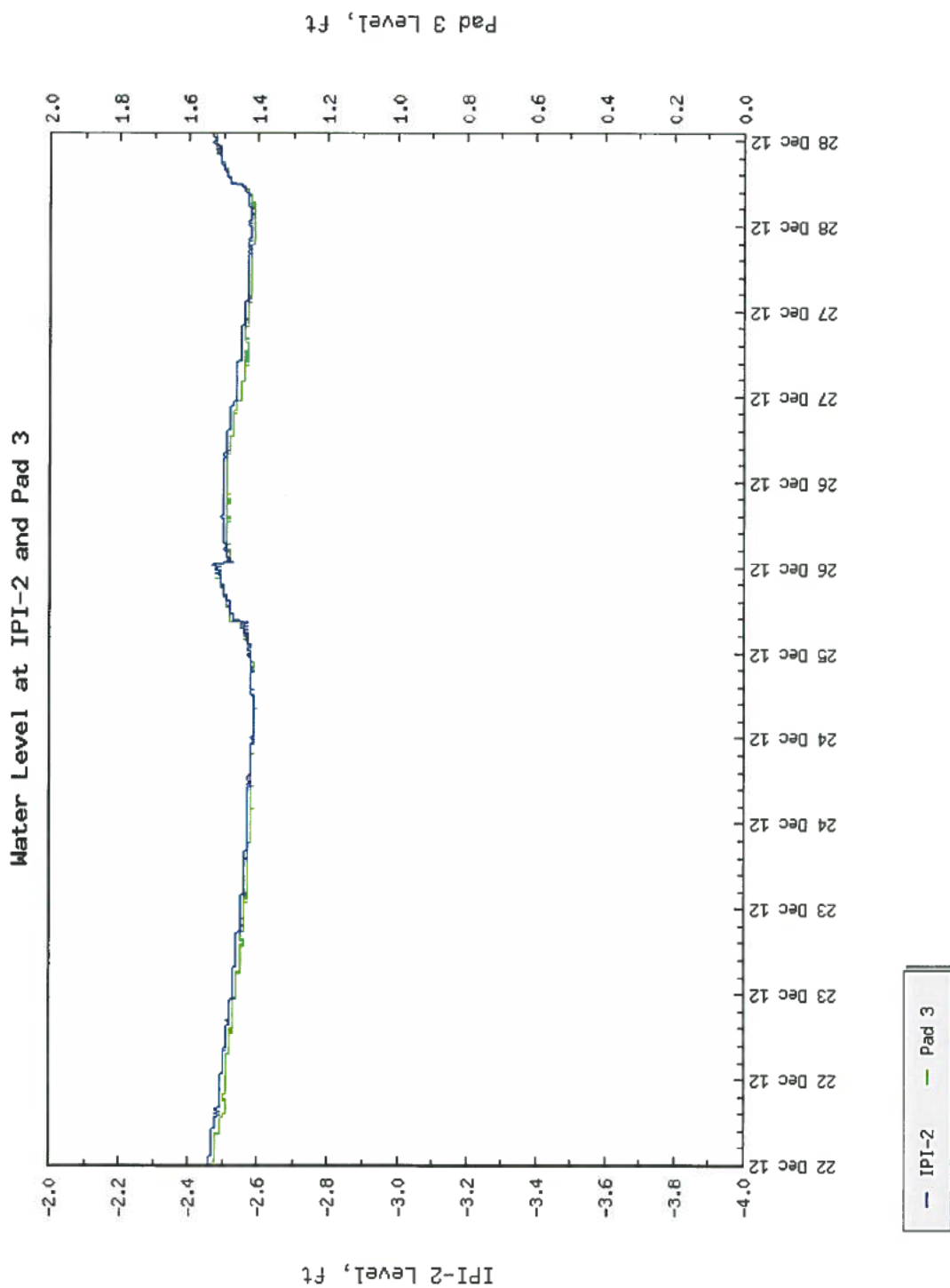


Figure 5. Water Level Temporal Trends.

RSI-xxxx-xx-xxx



Sinkhole survey data provided by Joel Miller & Associates. Survey date 10/30/12

Figure 6. Tilt recorded by IPI-2 (0.02 degrees) and IPI-4 (0.05 degrees) at 2:15 am on December 26th IPI-2.

45°F Belle Rose, Louisiana

Enter City, State, Country or U.S. Zip code or Airport Id Local Weather

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# Weather Report

Home » Local » Weather Report

## Belle Rose, Louisiana

Weather Report | Interactive Weather Map | Extended Forecast | Hourly Forecast | Past Observations | Historic Averages | Related

**Current Conditions - °F | °C** As of 9:53 AM on Wednesday 02 Jan 2013 (Local Time) from KBTR Reporting Station

Scattered Clouds <b>45°F</b> Feels Like: 41° Wind Chill: 41° Heat Index: 45° Dew Point: 39° Humidity: 80% Pressure: 30.22" Ceiling: Unl Visibility: 10mi Wind: 8mph Direction: 20° (NNE) Gusts: NA Report Text: KBTR 021553Z 02007KT 10SM SCT014 07/04 A3022 RMK AO2 SLP231 T00720039	<b>Today's Forecast</b>		<b>No Weather Alerts for this location</b>
	11 AM	48°	
	12 PM	48°	
	1 PM	49°	
View Detailed Observations for the last 48 Hours · 14 Days		View Complete Hourly Forecast »	Radar · Satellite · Surface Analysis

**10 Day Forecast - °F | °C** View the Detailed Extended Forecast »

wed	thu	fri	sat	sun	mon	tue	wed	thu	fri
jan 02	jan 03	jan 04	jan 05	jan 06	jan 07	jan 08	jan 09	jan 10	jan 11
Few Showers	P Cloudy	P Cloudy	Showers	P Cloudy	Sunny	Sunny	M Sunny	Sct Showers	Showers
51° 40°	55° 37°	56° 40°	59° 41°	61° 36°	60° 38°	66° 43°	68° 48°	69° 52°	70° 39°

**Details for Wednesday, January 02**  
 Cloudy with a few showers. High 51F. Winds N at 5 to 10 mph. Chance of rain 30%.  
**Evening:** Cloudy with a few showers. Low near 40F. Winds N at 5 to 10 mph. Chance of rain 30%.

UV Index: 2 (Low)    Relative Humidity: 73%    Precipitation: 30%    Snow: 0%    Cloud Coverage: 92%

Sunrise: 7:00 AM    Moonrise: 10:23 PM    Moonphase: Waning Gibbous    Direction: N (360°)  
 Sunset: 5:17 PM    Moonset: 10:06 AM    Speed: 10Mph(16Km, 9Kts)

Daily Forecast Chart Chart Options: Temperature